MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2015/2016

PCA0016 – COMPUTER APPLICATIONS AND PROGRAMMING

(Foundation in Engineering)

13 OCTOBER 2015
2:30 PM – 4:30 PM
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **EIGHT** pages (excluding the cover page) with **THREE** Sections only.

2. Answer **ALL** questions in **Section A, B** and **C**.

3. Please mark the answers for **Section A and Section B** on the **OMR form** provided.

4. Please write the answers for **Section C** in the **Answer Booklet** provided.

SECTION A: MULTIPLE CHOICE [25 MARKS]

Instructions: Answer **ALL** questions in this section. Shade your answers on the **OMR** sheet.

1. Computer is a device capable of processing _____ into _____.
   A. information, output
   B. data, information
   C. information, data
   D. data, input

2. _____ contains a list of related instructions, organized for a common purpose.
   A. GUI (Graphical user interface)
   B. Processor
   C. Memory
   D. Software

3. There are two types of system software, namely _____ and _____.
   A. operating system, utility programs
   B. operating system, application software
   C. application software, software suit
   D. proprietary software, application software

4. _____ is specifically designed to carry out functions based on the requirements in which it reside.
   A. Embedded computer
   B. Supercomputer
   C. Desktop computer
   D. Mobile computer

5. Which of the following is a TRUE statement about Radio-frequency identification (RFID) technology?
   A. It uses radio signal to communicate with a tag.
   B. RFID tags contain an antenna and magnetic stripe.
   C. It requires line of site transmission.
   D. RFID reader reads information on the barcode via radio waves.

6. _____ utilizes light source to read the document and translate them into digital data for further processing.
   A. Optical scanner
   B. Sheet-fed
   C. Optical reader
   D. Bar code reader

Continued...

7. _____ uses separate transistor to supply charges to each liquid crystal cell and thus display high quality color that is viewable from all angles.
   A. LCD display
   B. LED display
   C. TFT display
   D. Plasma display

8. The following features determine the capacity of hard disk, EXCEPT
   A. The number of platters.
   B. The composition of magnetic coating on the platters.
   C. Longitudinal or perpendicular recording.
   D. Digital or analog recording.

9. • UNIX
   • Solaris
   • NetWare
   • Linux

   Listed above are some examples of _____.
   A. Server operating system
   B. Embedded operating system
   C. System software
   D. Stand-alone operating system

10. Which of the following is NOT the function of an application software?
    A. Increase efficiency in business activity.
    B. Assist multimedia and graphics projects.
    C. Facilitate communication.
    D. Configuring devices.

11. When writing data to RAM, the processor sends _____ of memory cell in which to store data to memory controller.
    A. location
    B. position
    C. address
    D. coordinate

12. Files in a _____ disk are stored in _____ sector, thus slows down disk access.
    A. fragmented, contiguous
    B. defragmented, noncontiguous
    C. defragmented, contiguous
    D. fragmented, noncontiguous

13. Following statements are TRUE for low-level language, EXCEPT
    A. It is machine dependent.
    B. Runs on specific type of computer.
    C. It is the second generation of programming language.
    D. The instructions use a series of binary digits or combination of numbers and letters that represents binary digits.

Continued...

14. A(n) _____ is a special program that converts the entire source program into machine language.
    A. compiler
    B. interpreter
    C. source program
    D. assembler

15. The _____ control structure repeats one or more times as long as a condition is true.
    A. case
    B. sequence
    C. do-while
    D. selection

16. _____ is an item that can contain both data and the procedures that read or manipulate that data.
    A. Object
    B. Information
    C. Algorithm
    D. Script

17. In a(n) _____, the programmer uses a series of English-like words to write instructions that tell the computer what to accomplish and how to do it.
    A. assembly language
    B. procedural language
    C. machine language
    D. object-oriented programming (OOP) language

18. The _____ enable users and programmers to retrieve data from files or a database.
    A. first-generation language
    B. second-generation language
    C. third-generation language
    D. fourth-generation language

19. _____ is a network that covers a large geographical area by using a communication channel that combines various types of media together.
    A. Wide area network (WAN)
    B. Metropolitan area network (MAN)
    C. Local area network (LAN)
    D. Wireless local area network (WLAN)

20. When computer send data over internet, the data is divided into _____ which contain the data, destination, sender and sequence information.
    A. packet
    B. segment
    C. frame
    D. block

Continued...

21. On a _____ network, computers and other devices connect to a single central cable.
    A. star
    B. bus
    C. ring
    D. mesh

22. _____ refer to the amount of data, instructions, and information that can travel over a communication network.
    A. Latency
    B. Capacity
    C. Speed
    D. Bandwidth

23. A standard that outlines characteristics of how two network devices communicate is called _____.
    A. network standard
    B. protocol
    C. network topology
    D. phone line network

24. _____ is an appearance of motion created by displaying a series of still images in sequence.
    A. Graphic
    B. Virtual reality
    C. Animation
    D. Multimedia

25. _____ software enables professional designers to create sophisticated documents that contain text, graphics and many colors.
    A. Desktop publishing
    B. Paint/ Image publishing
    C. Photo editing
    D. Video and audio editing

Continued...

SECTION B: TRUE OR FALSE [15 MARKS]

Instructions: Shade your answers on the OMR form provided. Shade **A for True** and **B for False.**

26. An information system needs hardware, software, data, procedure and server works together to produce meaningful information.

27. A standard game console uses handheld controller as an output device.

28. Resolution is the total number of pixels that can be displayed on a screen.

29. A removable hard disk is a free standing device which connects to computer through a cable or wirelessly.

30. Performance monitor is a type of utility program to visualize the performance of a computer.

31. Nonvolatile memory does not need continuous power supply to hold saved data.

32. Adware automatically renders advertisement through pop-up windows.

33. Microfilm is an inexpensive storage medium, yet with the longest life expectancy.

34. Coding a program involves translating the solution algorithm into a programming language.

35. A sequence control structure tells the program which action to take, based on certain condition.

36. Ethernet utilized bus topology with the networks wired in a star pattern.

37. A ring network can span a larger distance than a bus network, and it is easier to install.

38. Computer-aided design (CAD) software is a sophisticated type of system software that assists a professional user in creating engineering, architectural, and scientific designs.

39. Page layout is the process of arranging text and graphics in a document on a page-by-page basis.

40. A graphic is an analog representation of non-text information.

Continued...

SECTION C: SHORT ANSWER [60 MARKS]

Instructions: Answer **ALL** questions in this section. Write your answers in the Answer Booklet.

QUESTION 1 [20 marks]

a. List down and briefly explain any THREE (3) disadvantages of using computers.

[6 marks]

b. Mainframe and supercomputer are two categories of computer. Briefly explain what they are and give an example in which area are these computer being used?

[4 marks]

c. Define the following FOUR (4) categories of software: packaged, custom, open source and shareware.

[4 marks]

d. There are TWO (2) types of cache, memory cache and disk cache. Explain these two cache and point out on what computer hardware they are available.

[4 marks]

e. What is the difference between a trackball and a touchpad?

[2 marks]

Continued...

QUESTION 2 [20 marks]

a. Identify the letter of the choice that best matches the phrase or definition.

1. Software that allows user to access and view web pages on the internet.	A. Text messaging
2. Integrated in most mobile devices which allows user to write and send brief, electronic messages between two mobile devices.	B. Message board
3. The electronic equivalent of a user manual which get the information from the internet.	C. E-mail
4. Online area where users have written discussions about general or specific topics.	D. Wi-fi
5. A method of uploading and downloading files with another computers on the internet.	E. Online help
6. An equivalent of letters sent and received, this service are available free on portals on the web and included with paid internet access service.	F. Search engine
7. Kind of network that uses radio signals to provide high-speed Internet connections to compatible devices.	G. Web browser
8. Particularly helpful in locating web pages about certain topics or in locating specific pages for which a user does not know the exact web address.	H. FTP

[8 marks]

b. What is a multimedia authoring software? Give TWO (2) examples of commonly used multimedia authoring software.

[3 marks]

c. In your work as the lead developer in a Web design company for a major corporation, you are assigned to develop a system, using a scripting language, for users to be able to login and access information.

i. What is scripting language?

[1 mark]

ii. What are the THREE (3) different graphic file format that you can place on your website?

[3 marks]

iii. What is the database that you would likely used for the system?

[1 mark]

iv. Recommend a web page editing software to design your site.

[1 mark]

d. List down and explain briefly THREE (3) different types of broadband connections.

[3 marks]

Continued...

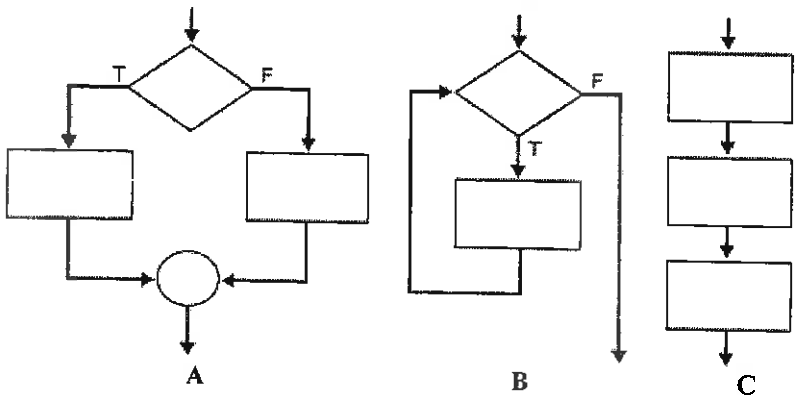
QUESTION 3 [20 marks]

a. What is a programming language? What are the two categories of languages, and give TWO (2) examples of each category.

[5 marks]

b. Label the three control structures given in the diagram below.

[3 marks]



From the control structures:

i. Which control structure uses the IF statement.

[1 mark]

ii. Based on the control structure A, will the FALSE condition be executed always? Give your reasons.

[2 marks]

iii. Based on the control structure B, what do you call if the FALSE condition is never executed?

[1 marks]

iv. DO UNTIL and DO WHILE statements are most likely be using which control structure?

[1 marks]

c. Write a program (code segment) attached to a button in Visual Basic to determine if a number entered is either odd or even. The number entered in a text box named txtNumber and the output message is place in a label named lblResult. Your program should check for valid input.

[7 marks]

End of Paper